From: <u>Cutt, Diana</u>

To: <u>Schofield, Susan</u>; <u>Zeno, Denise</u>

Subject: RE: Cabo Rojo - FLUTe ports in bedrock wells

Date: Wednesday, September 18, 2013 10:43:16 AM

Thank you!

From: Schofield, Susan [mailto:SchofieldSE@cdmsmith.com]

Sent: Wednesday, September 18, 2013 9:23 AM

To: Zeno, Denise Cc: Cutt, Diana

Subject: RE: Cabo Rojo - FLUTe ports in bedrock wells

Buenos días Denise and Diana,

I will attach a draft figure that shows the monitoring well locations and their status. The Pozo Escuela was drilled by PRASA as a supply well but never used for that purpose. It is in a great location to convert to a multiport well.

We did not do any FLUTe drop tests – that work was eliminated when we had major drilling issues in the bedrock and EPA has little to no additional money to put in double and triple cased wells. Please don't hesitate to call me with questions, the drilling and installation of the bedrock monitoring wells was very complicated.

Susan

787-722-5428

From: Zeno, Denise [mailto:Zeno.Denise@epa.gov]
Sent: Tuesday, September 17, 2013 5:22 PM

To: Schofield, Susan **Cc:** Cutt, Diana

Subject: FW: Cabo Rojo - FLUTe ports in bedrock wells

Susan.

Could you please answer Diana's question (see email below)?

thanks

From: Cutt, Diana

Sent: Tuesday, September 17, 2013 2:48 PM

To: Metz, Chloe **Cc:** Zeno, Denise

Subject: RE: Cabo Rojo - FLUTe ports in bedrock wells

Sure. One quick question for Denise – do you have a site map handy and did CDM Smith do a "FLUTe liner drop test" when they installed the liners? Thanks. (actually that was two questions!)

From: Metz, Chloe

Sent: Tuesday, September 17, 2013 2:17 PM

To: Cutt, Diana Cc: Zeno, Denise

Subject: RE: Cabo Rojo - FLUTe ports in bedrock wells

Thanks, Diana!

Denise, Diana thought she could get you something tomorrow.

Chloe Metz

Chief, Technical Support Section

Emergency and Remedial Response Division

US EPA, Region 2

290 Broadway, 18th Floor New York, NY 10007 212.637.3955 (desk) 212.637.4439 (fax)

From: Cutt, Diana

Sent: Tuesday, September 17, 2013 11:21 AM

To: Metz, Chloe

Subject: RE: Cabo Rojo - FLUTe ports in bedrock wells

I can give it a quick look

From: Metz, Chloe

Sent: Tuesday, September 17, 2013 11:05 AM

To: Alvey, Robert; Cutt, Diana; Flynn, Kathryn; Modica, Edward; Scorca, Michael; Singh, Sharissa

Cc: Zeno, Denise

Subject: FW: Cabo Rojo - FLUTe ports in bedrock wells

All,

Sorry for the mass email, but does anyone have time for a quick review of the Cabo Rojo geophysical results? The contractor needs to make some quick decisions about where to locate the FLUTe ports. This is one of Katie's sites that we didn't reassign. Thanks!

Chloe Metz

Chief, Technical Support Section Emergency and Remedial Response Division US EPA, Region 2 290 Broadway, 18th Floor New York, NY 10007

212.637.3955 (desk) 212.637.4439 (fax)

From: Zeno, Denise

Sent: Tuesday, September 17, 2013 10:50 AM

To: Metz, Chloe

Subject: RE: Cabo Rojo - FLUTe ports in bedrock wells

Hi, Chloe,

The pdf files contains minimal information (probably 15 to 30 min to review data and provide feedback). I need a guick review of the data and feedback from hydro.

The contractor is awaiting for our approval to buy and install the FLUTe system. Based of the geophysical results (fracture zones and flow zones) and the wireline sample results in these files, does the hydro agrees with the contractor's recommendation for port intervals?

Contractor's statement is as follows:

"a aspreadsheet that suggests port intervals for 2 wells – MW-9R and also Pozo Escuela, which we would like to convert into a multiport monitoring well. The geophysical logging results are attached for MW-9R, Pozo Escuela and Ana Maria. The suggested port intervals are based on the geophysical results (fracture zones and flow zones) and the wireline sample results. " thanks

From: Metz, Chloe

Sent: Monday, September 16, 2013 4:04 PM

To: Zeno, Denise

Subject: RE: Cabo Rojo - FLUTe ports in bedrock wells

Denise, when do you need comments? Unfortunately, Katie didn't reassign Cabo since she wasn't

anticipating having anything in for review. So, it will just take a little time for me to figure out who has time right now. Thanks!

Chloe Metz

Chief, Technical Support Section

Emergency and Remedial Response Division

US EPA, Region 2

290 Broadway, 18th Floor

New York, NY 10007

212.637.3955 (desk) 212.637.4439 (fax)

From: Zeno, Denise

Sent: Monday, September 16, 2013 3:00 PM

To: Metz, Chloe

Subject: FW: Cabo Rojo - FLUTe ports in bedrock wells

Hi Chloe!

Attached are the geophysical testing and wireline sampling for some wells in Cabo Rojo. I forgot that Katherine is still in maternity leave. Could you please let me know who in your group can review these documents and provide feedback?

Thanks

Denise

From: Zeno, Denise

Sent: Monday, September 16, 2013 2:43 PM **To:** Mishkin, Katherine; Hauptman, Mel

Subject: FW: Cabo Rojo - FLUTe ports in bedrock wells

For your review and feedback!

thanks

From: Schofield, Susan [mailto:SchofieldSE@cdmsmith.com]

Sent: Monday, September 16, 2013 1:25 PM

To: Zeno, Denise **Cc:** Delano, Frances

Subject: Cabo Rojo - FLUTe ports in bedrock wells

Buenas tardes Denise,

I will attach several files with results from the geophysical testing and wireline sampling at some of the wells at Cabo Rojo, including a spreadsheet that suggests port intervals for 2 wells – MW-9R and also Pozo Escuela, which we would like to convert into a multiport monitoring well. The geophysical logging results are attached for MW-9R, Pozo Escuela and Ana Maria. The suggested port intervals are based on the geophysical results (fracture zones and flow zones) and the wireline sample results.

As soon as EPA approves the port intervals, we will place the order with FLUTe and install the equipment in the wells as soon as the components are built and shipped to Puerto Rico. I am available all week if you want to discuss any of the attached data.

Best,

Susan

SUSAN E. SCHOFIELD, P.G. CDM SMITH 1225 PONCE DE LEON AVENUE VIG TOWER, SUITE 603 SAN JUAN, PR 00907 SCHOFIELDSE@CDMSMITH.COM 787-722-5428 203-645-2549 (MOBILE)